

Work Order ID 152765

Monday, November 07, 2016 3:09:23 PM

152765

Page 1

Item ID: 646.3813

Revision ID:

Item Name: Strut Bracket

Start Date: 10/17/2016 Start Qty: 5.00

Required Date: 11/7/2016 Req'd Qty: 5.00

Reference:

Accept

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan:

DAS
21
9-89

Date: NOV 10 2016 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.3800	N/C								

110

110

Mill Conv

Conventional Milling Machine

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per DWG
DWG REV: N/C

2- deburr and break all sharp edges

0.00

0.38

DAS
32
9-89

16-11-14

120

120

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.01

DAS
32
9-89

16-11-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Work Order ID 152765

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Item ID: 646.3813 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Strut Bracket
Start Date: 10/17/2016 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 11/7/2016 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.02				5	0		DAS 45 10-11-14 9-89
140 *140* Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1 Memo Issue P/O to ATG : <u>34382</u> 1- Black Anodize as per Dwg 646.3800 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Comformity is required	0.00 149.99				5		NOV 21 2016	DAS 13 9-89
150 *150* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 0.02				5x			8/16-11-25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155 *155* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.02				5			DAS 38 9-88 NOV 25 2016
180 *180* Packaging Packaging	Identify as per dwg & Stock Location: <u>CLK106</u> Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***	0.00 0.01				5			DAS 6 9-88 NOV 28 2016
190 *190* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.08							16/11/29 JF DAS 21 9-88 NOV 28 2016

DQA: _____ Date: _____



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Picklist Print

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Work Order ID: 152765

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Parent Item: 646.3813

646.3813

Parent Item Name: Strut Bracket

Start Date: 10/17/2016

Required Date: 11/7/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6A0.75X0.75X 0.060X0.062		Purchased		No			f	62.3580		0.578947			

***M7075T6A0 75X0 75X0 060X0**

7075T6 ANGLE .75" X .75" X .060" X .062"W

16-11-14

DAS
32
9-89

Location

MAT051

123947

Loc Qty

62.358

62.358

8.854'

Loc Code

1.323'

DQA: _____ Date: _____



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Root Cause <table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
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OTHER :																																																																				

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03697				SHEET 1 OF 1	
	DWG NO. 646.3800	REV: N/C	PREPARED BY B. PETERS	DATE: 11/14/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: BRACKETS					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED ALTERNATE MATERIAL.				ECR: D-12-006	

IS

1 PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

SHEET 1, ZONE A2 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 152765 MLC
/6-11-16

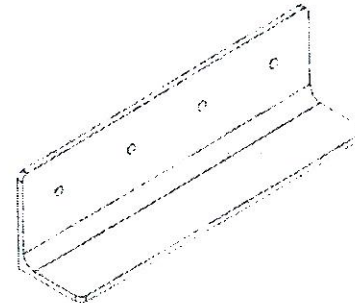
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

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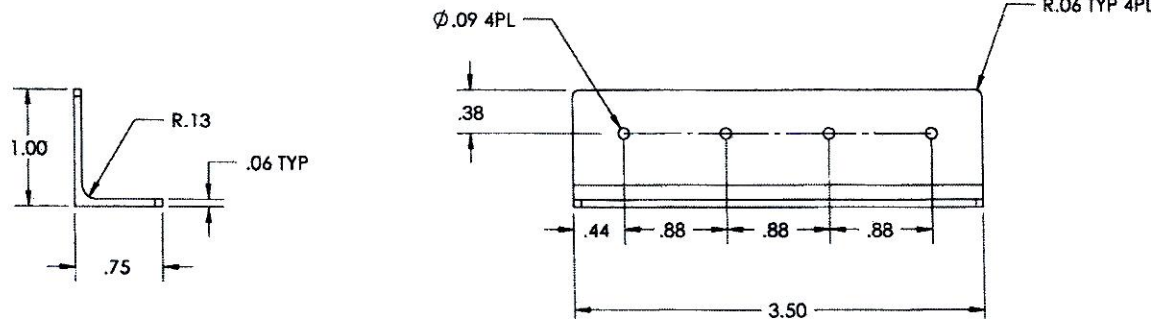
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 DEBURR AND BREAK ALL SHARP EDGES
- 4 IDENTIFY IAW MPP-120



646.3810



UNINCORPORATED ECU (S)

03/09/97

		646.3814	WIPER BRACKET	▲	▲
		646.3813	STIRLIT BRACKET	▲	▲
		646.3812	GUSSET BRACKET	▲	▲
		646.3811	RADIUS BLOCK	▲	▲
		646.3810	BRACKET	▲	▲
QTY FIND #		PART #	DESCRIPTION	MATL	SPEC.
QTY			PARTS LIST		
NEXT ASSY IS:		APICAL INDUSTRIES			
646.4000		2608 TEMPLE HEIGHTS DR.			
DRAWING APPROVAL		OCEANSIDE, CA. 92056-3512 (760)724-5300			
CORRECTION		BRACKETS			
UNLESS OTHERWISE SPECIFIED		SHEET 1 OF 5			
DIMENSIONS ARE IN INCHES		SCALE NONE			
3 PLACE DECIMALS 1/16		DWG. NO. 646.3800			
ANGLES 1/32		REV. C 07M26			
3 PLACE DECIMALS 1/16		SCALE NONE			
CORRECTION		SHEET 1 OF 5			

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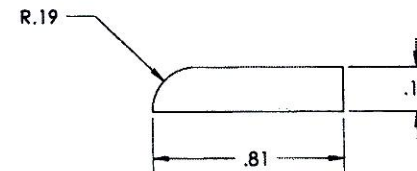
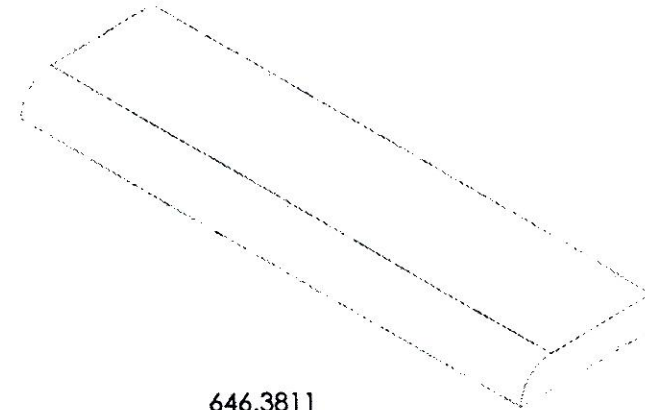
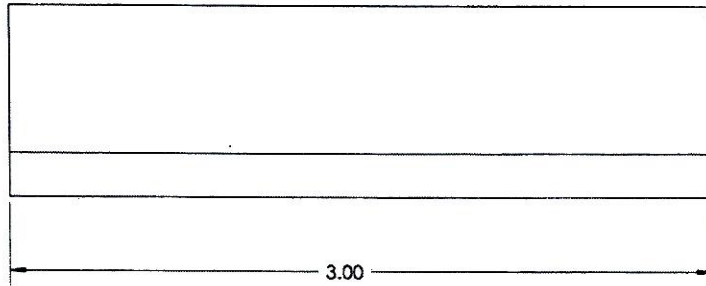
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

A

B

C

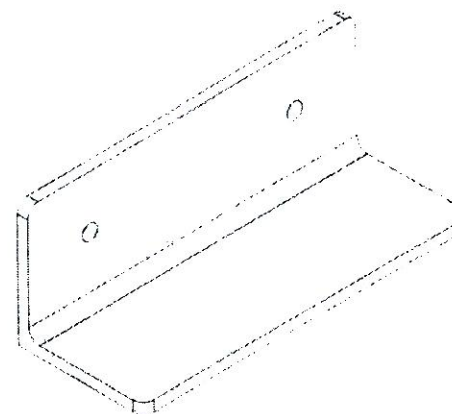
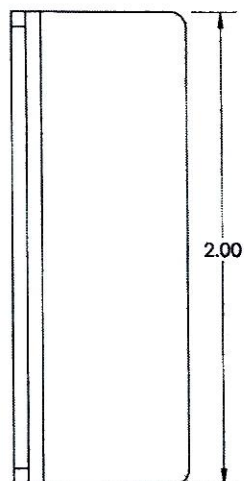
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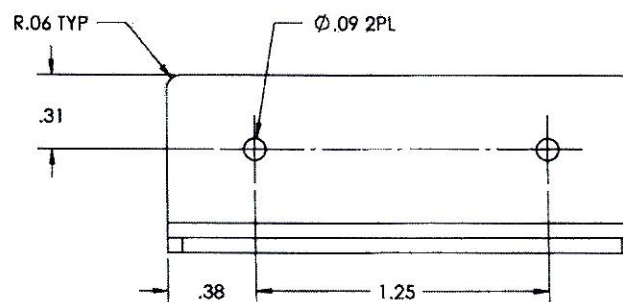
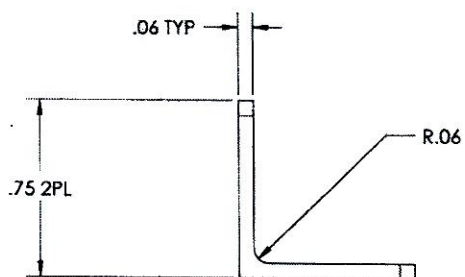
NEXT ASSY (S)	ORIGINAL DATE 06-19-06	APICAL INDUSTRIES	
	DRAWN BY J. GARDNER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
	CHECKED	BRACKETS	
	DRAWING APPROVAL	646.3800	
CONTRACT NO.		SIZE B	REV N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 1 PLACE DECIMALS ± .010 ANGLES ± .5°		DWG. NO. 07M26	SCALE NONE
		SHEET 2 OF 5	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3812

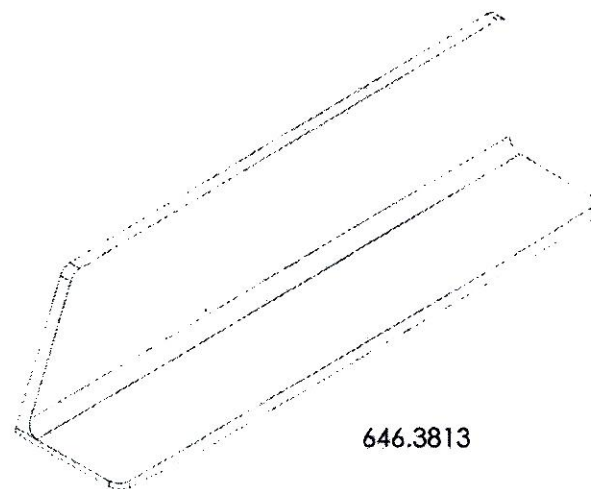


NEXT ASSY (S)	ORIGINAL DATE	08-19-08	APICAL INDUSTRIES	
	MOD DATE	08-19-08		
	DRAWN BY	CHUCKER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
	DESIGNED BY			
	DRAWING APPROVAL		BRACKETS	
	CONTRACT NO.		SCALE	SHEET 3 OF 3
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°			

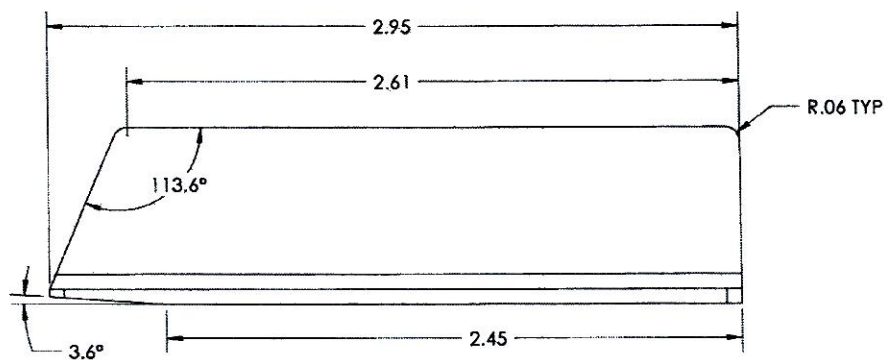
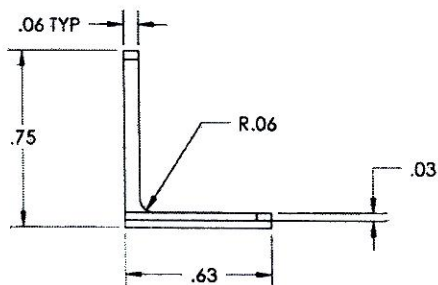
646.3800

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



646.3813



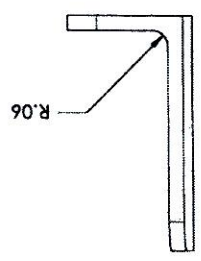
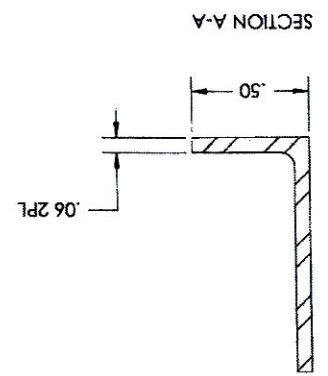
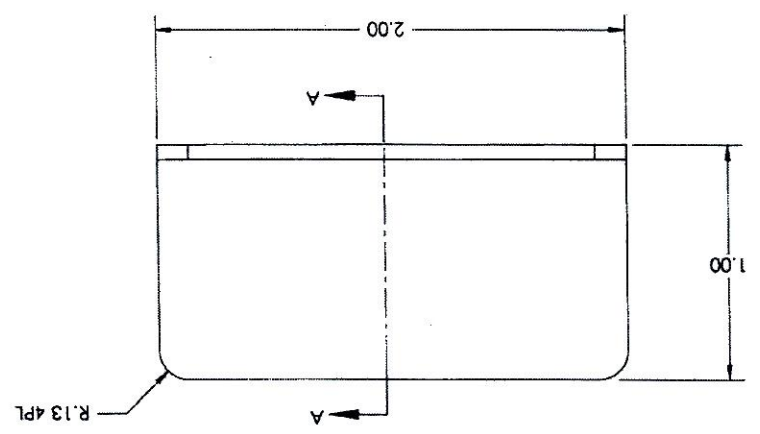
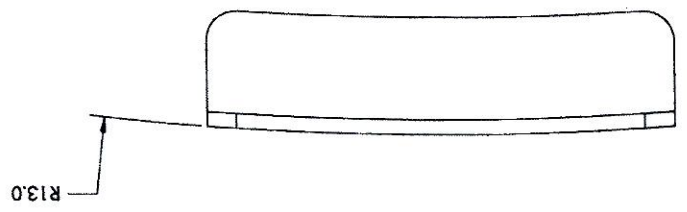
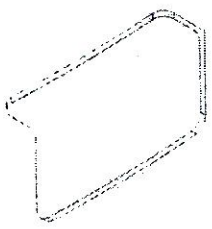
NEXT ASSY (S)	ORIGINAL DATE	06-19-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
	UNDO DATE		
	DRAWN BY		
	DRAWING APPROVAL		
	CONTRACT NO.		BRACKETS
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ± .015 2 PLACE DECIMALS ± .005 ANGLES ± .5°		
	SCALE	NONE	
	SHEET	4 OF 5	

646.3800 N/C

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REV	DESCRIPTION	DATE	APPROVED

646.3814



APICAL INDUSTRIES		2608 TEMPLE HEIGHTS DR.		OCEANSIDE, CA. 92056-3512		(760) 724-5300	
DRAWN BY: JESSE		CHECKED BY: JESSE		DATE: 08-16-09		NEXT ASSY IS:	
APPROVED BY:		DATE:		REVISION:		DESCRIPTION:	
BRACKETS		646.3800		N/C		SHEET 3 OF 5	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO34382**

Purchase Order Date 11/21/2016

PO Print Date 11/21/2016

Page Number 2 of 3

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Ship To Contact

Terms Net 30

Ship To Phone

Currency CAD

Ship Via:

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Ship Acct:

152765

DAS
38
9-89

646.3813 STRUT
BRACKET REV. N/C

11/28/2016

5.00

\$6.10

\$30.50

Yes

11/28/2016

SP16-11-25

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total:

\$30.50

4 153188

647.1714 PLATE REV. E

11/25/2016

4.00

\$30.25

\$121.00

Yes

11/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

NOTE: PARTS ARE RUSH REQUIRED FOR THE 25 OF NOVEMBER

Line Total:

\$121.00

5 153189

647.1715 PLATE REV. E

11/25/2016

10.00

\$30.25

\$302.50

Yes

11/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

NOTE: PARTS ARE RUSH REQUIRED FOR THE 25 OF NOVEMBER

Line Total:

\$302.50

Note:

11/21/2016



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912585

Date: 25-Nov-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
20 ea	Part: D2348 Wearplate Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20405	Rev: C PO: PO34382	Line: 1
2 ea	Part: 647.1514 Upper Deflector Black Hard Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-P-23377J, Type I, Class N Job: 20406	Rev: D PO: PO34382	Line: 2
5 ea	Part: 646.3813 ✓ Strut Black Hard Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-P-23377J, Type I, Class N Job: 20407	Rev: N/C PO: PO34382	Line: 3
4 ea	Part: 647.1714 Plate Black Hard Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-P-23377J, Type I, Class N Job: 20408	Rev: E PO: PO34382	Line: 4
10 ea	Part: 647.1715 Plate Black Hard Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-P-23377J, Type I, Class N Job: 20409	Rev: E PO: PO34382	Line: 5
1 ea	Part: ADMIN FEE Administrative Fee	Rev: N/A	

DAS
38
9-89

SP 16-11-25.



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912585

Date: 25-Nov-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	Job: 20410 PO: PO34382 Line: 7		
DATE : <u>25/11/16</u>			
CERTIFIED SIGNATURE : <u>[Signature]</u>			
RECEIVER SIGNATURE : <u>SP/16-11-25</u>			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.			
MADE IN CANADA.			

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9-89